

CLAIMS

1. A method of manufacturing active matrix display backplanes and displays therefrom, comprising:

providing a substrate;

forming a pattern of pixels on said substrate;

forming a plurality of row and column intersecting pixel activation lines, interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another;

forming an outer electrostatic discharge guard ring on said substrate coupled to said interconnected row and column lines via a resistance to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays; and

removing said outer guard ring and row and column interconnections prior to completion of the display.

2. The method as defined in claim 1 including coupling one plurality of said interconnected row and column lines to said outer guard ring via said resistance.

3. The method as defined in claim 2 including forming at least one pickup pad coupled to said resistance via a shunt switching element.

4. The method as defined in claim 3 including coupling said pickup pad to the other plurality of said interconnected row and column lines via another shunt switching element.

5. The method as defined in claim 3 including forming a corner on said pad to align the front plane and back plane of the display.

6. The method as defined in claim 3 including forming a plurality of pickup pads, each one on a separate corner of the display.

7. The method as defined in claim 1 including forming a corner pad on at least one corner of the display and aligning scribe lines with said corner pad for removing said outer guard ring and row and column intersections.

8. The method as defined in claim 1 including forming an inner electrostatic discharge guard ring on said substrate coupled to said row and column lines via shunt switching elements to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays and thereafter.

9. The method as defined in claim 8 including forming separate shunt switching elements between said inner guard ring and each row and column line.

10. A method of manufacturing active matrix display backplanes and displays therefrom, comprising:

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providing a substrate;
forming a pattern of pixels on said substrate;
forming a plurality of row and column intersecting pixel activation lines; and

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forming an inner electrostatic discharge guard ring on said substrate coupled to said row and column lines via shunt switching elements to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays and thereafter.

11. The method as defined in claim 10 including forming separate shunt switching elements between said inner guard ring and each row and column line.

12. The method as defined in claim 10 including interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another and forming an outer electrostatic discharge guard ring on
5 said substrate coupled to said interconnected row and column lines via a resistance to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays; and

10 removing said outer guard ring and row and column interconnections prior to completion of the display.

13. The method as defined in claim ~~12~~ including coupling one plurality of said interconnected row and column lines to said outer guard ring via said resistance.

14. The method as defined in claim 13 including forming at least one pickup pad coupled to said resistance via a shunt switching element.

15. The method as defined in claim ~~14~~ including coupling said pickup pad to the other plurality of said interconnected row and column lines via another shunt switching element.

16. The method as defined in claim ~~14~~ including forming a corner on said pad to align the front plane and back plane of the display.

17. The method as defined in claim ~~10~~ including forming a plurality of pickup pads, each one on a separate corner of the display.

18. The method as defined in claim ~~10~~ including forming a corner pad on at least one corner of the display and aligning scribe lines with said corner pad for removing said outer guard ring and row and column intersections.

19. An active matrix display backplane, comprising:

a substrate;

a pattern of pixels formed on said substrate;

a plurality of row and column intersecting pixel activation lines, substantially all of said row lines interconnected to one another and substantially all of said column lines interconnected to one another; and

an outer removable electrostatic discharge guard ring formed on said substrate coupled to said interconnected row and column lines via a resistance to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays.

20. The backplane as defined in claim ~~19~~ including one plurality of said interconnected row and column lines coupled to said outer guard ring via said resistance.

21. The backplane as defined in claim ~~20~~ including at least one pickup pad coupled to said resistance via a shunt switching element.

22. The backplane as defined in claim ~~21~~ including said pickup pad coupled to the other plurality of said interconnected row and column lines via another shunt switching element.

23. The backplane as defined in claim 21 including a corner formed on said pad to align the front plane and back plane of the display.

24. The backplane as defined in claim 21 including a plurality of pickup pads, each one formed on a separate corner of the display.

25. The backplane as defined in claim 19 including a corner pad formed on at least one corner of the display and having scribe lines aligned with said corner pad for removing said outer guard ring and row and column intersections.

26. The backplane as defined in claim 19 including an inner electrostatic discharge guard ring formed on said substrate coupled to said row and column lines via shunt switching elements to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays and thereafter.

27. The backplane as defined in claim 26 including separate shunt switching elements formed between said inner guard ring and each row and column line.

28. An active matrix display backplane, comprising:

a substrate;

a pattern of pixels formed on said substrate;

a plurality of row and column intersecting pixel activation lines; and

an inner electrostatic discharge guard ring formed on said substrate coupled to said row and column lines via shunt switching elements to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays and thereafter.

29. The backplane as defined in claim 28 including separate shunt switching elements formed between said inner guard ring and each row and column line.

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30. The backplane as defined in claim 28 including, interconnecting substantially all of said row lines to one another and substantially all of said column lines to one another and forming an outer electrostatic discharge guard ring on said substrate coupled to said interconnected row and column lines via a resistance to provide protection from electrostatic discharges between said row and column activation lines during manufacture of the displays; and removing said outer guard ring and row and column interconnections prior to completion of the display.

31. The backplane as defined in claim 30 including one plurality of said interconnected row and column lines coupled to said outer guard ring via said resistance.

32. The backplane as defined in claim 31 including at least one pickup pad coupled to said resistance via a shunt switching element.

33. The backplane as defined in claim 32 including said pickup pad coupled to the other plurality of said interconnected row and column lines via another shunt switching element.

34. The backplane as defined in claim 32 including a corner formed on said pad to align the front plane and back plane of the display.

35. The backplane as defined in claim 28 including a plurality of pickup pads, each one formed on a separate corner of the display.

36. The backplane as defined in claim 28 including a corner pad formed on at least one corner of the display and

having scribe lines aligned with said corner pad for removing said outer guard ring and row and column intersections.